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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,415	09/24/2001	Yasuyuki Anami	04739.0072	5646

7590 09/10/2003

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EXAMINER

NGUYEN, KIMBINH T

ART UNIT	PAPER NUMBER
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2671

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/960,415

Applicant(s)

ANAMI ET AL.

Examiner

Kimbinh T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-11 are pending in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harada et al. (5,844,563).

Claim 1, Harada et al. discloses holding process history data of a series of processes (a modification history data file 30 which stores records of modification of the model object; col. 5, line 44 through col. 6, line 6; figs. 3, 4 and 11); receiving a command for modification as a modification candidate process from among the series of processes (a first command, "straight sweeping" and its command ID of 1 are stored in a node 24; col. 6, lines 6-11; fig. 4); modifying the modification candidate process (col. 12, lines 37-51); wherein receiving a command presents a list including a part of the series to receive a process selected from the list (a list of the pair names for a given command is used as a part of an element list for the command; col. 6, lines 65-67). Harada does not teach a command for modification as a modification candidate process; however, Harada teaches a specified command selectively affecting a part of

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the 3D solid model (col. 12, lines 63-65), the data modifier updates the 3D solid model data accessed is referenced by an index of the history data (col. 3, lines 45-47; col. 12, lines 42-51), and the modification candidate process must be a part which has been selected and referenced from the index. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the Harada's teaching for using a specified command selectively affecting a part of the 3D model to create a modification candidate process, because it would implement interactive manner, these interactive features of the design system encourage the designer to attempt various design without recreating and redesigning intermediate stages of the design process (col. 10, lines 26-29).

Claims 2, 3, Harada et al. discloses the list includes processes among the series of processes, which meet a predetermined condition (predetermined commands, col. 13, lines 41-43); the predetermined condition is whether or not designation of a value parameter is included (predetermined commands with a parameter; col. 3, line 55), whether or not it is related to a predefined command, and whether or not it is included in the list (col. 13, lines 42-43).

Claim 9, Harada et al. discloses inputting a process to serve as a modification candidate process (a first command "straight sweeping" and its command ID of 1 are stored in a node 24, col. 6, lines 6-7; fig. 4); specifying a process (straight face sweeping process, col. 8, lines 22-24; fig. 10) to influence of modification applied to the modification candidate process associated with the process input (the given command performs its specified operation upon the elements referred by an indirect index, col. 8,

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lines 5-6) from among the series of processes (a series of processes of fig. 11); displaying the process specified as being subjected to the influence (a possible range of the amount for each command is also displayed, col. 8, lines 59-60). Harada does not teach the modification candidate process; however, Harada teaches a group of elements that are associated with a given command, the given command performs its specified operation upon the elements referred by an indirect index (col. 8, lines 4-7), the indirect index accessing a part of the 3D data corresponding to the selectively affected part of the 3D model (col. 3, lines 62-64). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the Harada's teaching for using a specified operation upon the elements referred by an indirect index to create a modification candidate process, because it would implement interactive manner, these interactive features of the design system encourage the designer to attempt various design without recreating and redesigning intermediate stages of the design process (col. 10, lines 26-29).

4. Claims 4-8, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harada et al. (5,844,563) in view of Marks (6,025,847).

Claim 6, the rationale provided in the rejection of claim 1 is incorporated herein. In addition, Harada et al. discloses adjustment that becomes necessary as a result of modification (adjusting the rest of the 3D solid model data based upon the modification history data in response to the modifying the part of the 3D solid model; col. 12, lines 52-53); Harada does not teach creating a series of adjustment procedure images according to the procedure for adjustment specified; however, Marks teaches specifying

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a set of parameters correspond to the shape, size and location of the primitives of the objects in the picture. The user then creates a second set that is more accurate by adjusting each primitive to more accurately match the location and size of each object in the picture. Rubber banding lines between the first 3D model and the second 3D model is then displayed to help the user see where a vertex was moved (col. 3, lines 3-12); displaying the adjustment (adjusting a vertex of a primitive and displaying the adjustment, col. 2, lines 53-54, fig. 9; Rubber banding lines 1110 are display to show the adjustment, col. 6, lines 54-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the adjustment procedure of 3D modeling system as taught by Marks into design modification data structure of 3D modeling taught by Harada for adjusting a primitive of a 3D model and displaying the adjustment, because it would allow a user to easily create a 3D model that looks like the physical objects and space and provide feedback (adjustment) of discrepancies between the model and an actual image of the objects (col. 1, lines 60-63). Further, **claim 7** Marks also teaches displaying a list for the procedure for adjustment specified (to resize a primitive to more accurately represent the object, the brick primitive that represents the toaster oven has been shortened to more accurately represent, col. 6, lines 28-55).

Claim 8, the rationale provided in the rejection of claims 1 and 6 is incorporated herein.

Claims 4, 5 and 10, the rationale provided in the rejection of claims 1, 6 and 8 is incorporated herein. In addition, Marks discloses a computer readable recording

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medium (col. 3, lines 45-52). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a computer readable medium taught by Marks into the system for modeling 3D solid model data based upon modification history taught by Harada for designing a 3D model object with an automatic updating feature which correctly and efficiently updates, because it would create a 3D model from an input file created by the user, allow the user easy review, feed back and modification (col. 1, lines 26-27).

Claim 11, the rationale provided in the rejection of claims 1, 4 and 6 is incorporated herein.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Sano (6,377,964) discloses CAD system for team-based design for managing undo and redo functions.
- Shimizu et al. (5,497,452) discloses method and apparatus for generating a geometric model.
- Bronfeld et al. (6,308,144) discloses method and apparatus for providing 3D model associativity.
- Bently et al. (6,063,128) discloses object-oriented computerized modeling system.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kimbinh Nguyen** whose telephone number is (703)

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305-9683. The examiner can normally be reached (**Monday- Thursday from 7:00 AM to 4:30 PM and alternate Fridays from 7:00 AM to 3:30 PM**).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Zimmerman, can be reached at (703) 305-9798.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

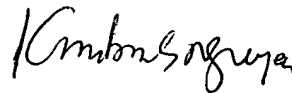
Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Part II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

September 4, 2003



Kimbinh Nguyen

Patent Examiner AU 2671